

# Welcome to: *Tribal Informational Webinar for the proposed revisions of Onshore Orders 3, 4, and 5*

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# **Tribal Informational Webinar**

## **Proposed Revision of Onshore Orders 3, 4, and 5**

*November 19, 2015*



# Ground Rules for Today's Session

- Questions and comments will be taken at the end of each section of the presentation.
- Be respectful of others when they are asking questions or stating comments.

# Outline


- Why are these regulations important?
- Why are we revising these Orders?
- Changes proposed for all three Orders
- Part 3170
- Subpart 3173 (Onshore Order 3)  
*Questions/comments*
- Subpart 3174 (Onshore Order 4)  
*Questions/comments*
- Subpart 3175 (Onshore Order 5)  
*Questions/comments*

**Why Are These Regulations  
Important?**

# Royalty Determination

## Oil

$$\text{Royalty} = \text{Royalty Rate} \leftarrow \text{Lease terms} \\ \times \text{Volume (bbl)} \\ \times \text{Value}^* (\$/\text{bbl}) \leftarrow \text{ONRR}$$

  
[API gravity]

\*value less transportation allowances

# Royalty Determination

## Oil

$$\begin{aligned} \text{Royalty} = & \text{Royalty Rate} \leftarrow \text{Lease terms} \\ & \times \text{Volume (bbl)} \leftarrow \text{Onshore Order 4 and 3} \\ & \times \text{Value}^* (\$/\text{bbl}) \leftarrow \text{ONRR} \\ & \quad \uparrow \\ & \quad [API \text{ gravity}] \end{aligned}$$

\*value less transportation allowances

# Royalty Determination

## Oil

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$\uparrow$   
[API gravity]

\*value less transportation allowances



# Royalty Determination

## Gas

$$\begin{aligned} \text{Royalty} = & \text{Royalty Rate} \longleftarrow \text{Lease terms} \\ & \times \text{Volume (Mcf)} \\ & \times \text{Heating Value (MMBtu/Mcf)} \\ & \times \text{Value* (\$/MMBtu)} \longleftarrow \text{ONRR} \end{aligned}$$

\*value less transportation and processing allowances

# Royalty Determination

## Gas

$$\begin{aligned} \text{Royalty} = & \text{Royalty Rate} \longleftarrow \text{Lease terms} \\ & \times \text{Volume (Mcf)} \longleftarrow \text{Onshore Order 5 and 3} \\ & \times \text{Heating Value (MMBtu/Mcf)} \\ & \times \text{Value* (\$/MMBtu)} \longleftarrow \text{ONRR} \end{aligned}$$

\*value less transportation and processing allowances

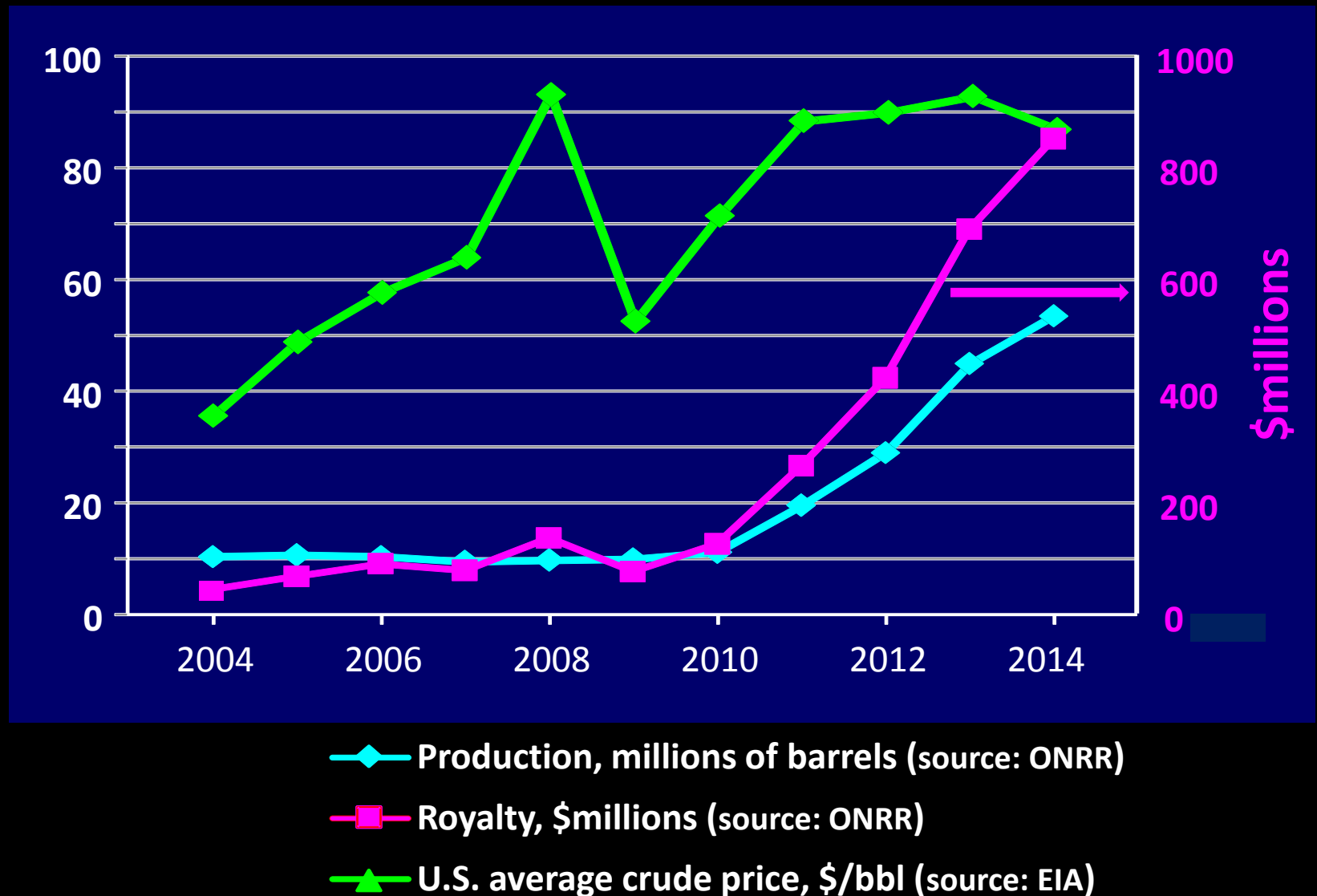
# Royalty Determination

## Gas

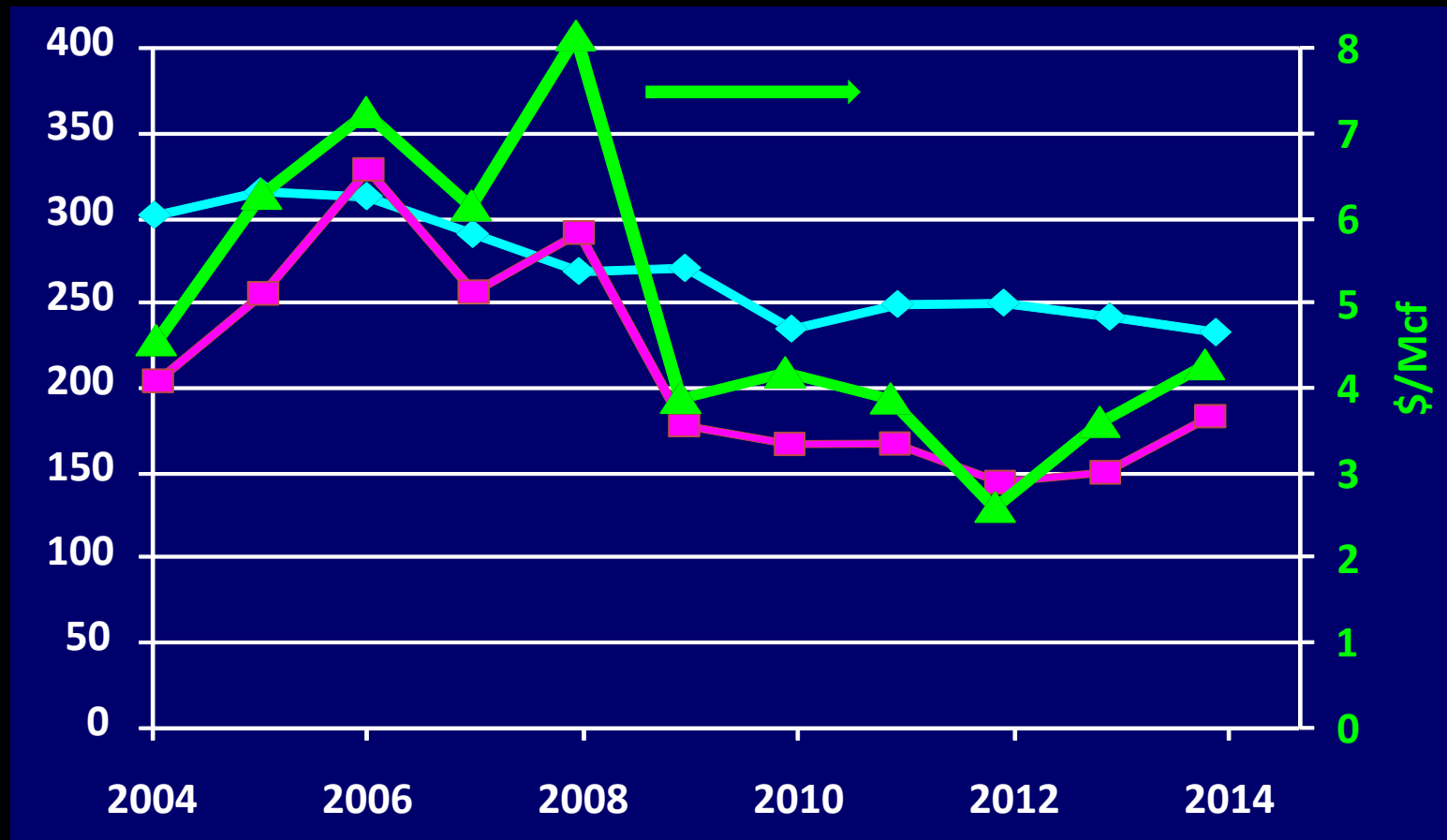
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\*value less transportation and processing allowances

# Native American Oil Production Statistics



# Native American Gas Production Statistics



- ◆— Production, millions of Mcf (source: ONRR)
- Royalty\*, \$millions (source: ONRR)
- ▲— U.S. average wellhead gas price (source: EIA)

\*includes NGL royalties

# **Why Are We Revising These Regulations?**



# 43 CFR Part 3170

Definitions, recordkeeping, bypass and tampering, variances, appeals, enforcement

**Subpart 3173** (Onshore Order 3): Site security, FMP, Commingling, Off-lease measurement

**Subpart 3174** (Onshore Order 4): Oil Measurement

**Subpart 3175** (Onshore Order 5, Statewide NTLs for electronic flow computers): Gas Measurement

# Why revise these Orders?

- Last revised in 1989
- Current orders do not address new technology or incorporate the latest industry standards & practices
- Gaps in existing orders that need to be addressed
- Need to respond to various reports and audits questioning adequacy of existing requirements:
  - RPC report (2007)
  - GAO audit (2010)
  - OIG audits

# Why revise these Orders?

- Improve measurement accuracy, reporting, and accountability

**General:** Proposed Changes  
Common to All Three Orders

# Common Proposed Revisions

## Orders

- Enforcement actions (major/minor, corrective action, timeframes) included with each provision

## Proposed Regulations

- Enforcement actions would be placed in a new enforcement handbook

# Common Proposed Revisions

## Orders

- One immediate assessment (Federal seals)

## Proposed Regulations

- Immediate assessments would be added to each subpart for liquidated damages



# Common Proposed Revisions

## Orders

- Technical review of alternate meter/device variances left up to individual Field Offices

## Proposed Regulations

- Would direct a Production Measurement Team (PMT) to provide meter/device approval at a national level

# **Part 3170: Proposed Changes Common to All Three Orders**

# Part 3170 Proposed Revisions

## Orders

- Requirements apply only to operators

## Proposed 3170

- Requirements for recordkeeping would apply to purchasers and transporters through the royalty settlement point or the point of first sale, whichever came first

# Part 3170 Proposed Revisions

## Orders

- Definitions given in each Order

## Proposed 3170

- Would include definitions common to more than one subpart

# Part 3170 Proposed Revisions

## Orders

- Variance section specific to each Order

## Proposed 3170

- One section on variances would apply to all three subparts
- Specific guidance on requesting and processing variance requests

# **Subpart 3173:** Site Security, FMP, Commingling, Off-lease Measurement



# 3173 Proposed Revisions

## Order 3

- No guidance or requirements for commingling and off-lease measurement

## Proposed 3173

- New procedures and requirements would be applied to obtain commingling and off-lease measurement approval:

# Commingling

**The BLM would only approve commingling if:**

- **There are no royalty impacts from allocation**
- **The BLM determined that the properties to be commingling qualified as “low volume”**
- **The BLM determined that there are extenuating circumstances such as environmental concerns or to achieve maximum ultimate economic recovery**

**The BLM would review existing commingling approvals during the FMP approval process. Existing approvals that did not meet the requirements in 3173 would be rescinded or modified.**

# 3173 Proposed Revisions

## Order 3

- Applies to “sales and allocation” meters
- Measurement relating to royalty payment is not consistently defined or tracked

## Proposed 3173

- Would apply to measurement affecting royalty
- BLM approval and tracking of Facility Measurement Points (FMP)

# 3173 Proposed Revisions

## Order 3

- Run tickets only required for tank sales; includes seal number, date on and off, valve/component, reason (water draining, hot oiling, etc.)

## Proposed 3173

- Documentation would be required for water draining, hot oiling, clean-up, and completion operations
- Run tickets covered in proposed 3174

# 3173 Proposed Revisions

## Order 3

- End of month inventory is not required

## Proposed 3173

- Operators would be required to measure and maintain records of end-of-month inventory

# 3173 Proposed Revisions

## Order 3

- No information required relating to royalty-free use

## Proposed 3173

- Make, model and BTU rating required for all equipment for which royalty-free use is claimed
- How royalty-free use will be determined (estimation or measurement)



# 3173 Proposed Revisions

## Order 3

- Required self inspection and site security plan

## Proposed Regulations

- Self inspection and site security plan would be eliminated

# 3173 Proposed Revisions

## Specific Data/Comment Requests

- Comments on whether or not a 10% rate of return is appropriate for determining whether a property qualifies as “low volume”
- Comments on time frames and volume thresholds for submitting applications for FMPs

**Questions/Comments**

# **Subpart 3174: Oil Measurement**

# 3174 Proposed Revisions

## Order 4

- No overall performance standards

## Proposed 3174

- Performance standards for uncertainty would be established:

# 3174 Proposed Uncertainty Requirements

<b>If the monthly volume averaged over the previous 12 months or the life of the FMP, whichever is shorter, is:</b>	<b>The overall volume measurement uncertainty must be within:</b>
<b>Greater than 10,000 bbl/month</b>	<b><math>\pm 0.35</math> percent</b>
<b>Greater than 100 bbl/month and less than 10,000 bbl/month</b>	<b><math>\pm 1.0</math> percent</b>
<b>Less than 100 bbl/month</b>	<b><math>\pm 2.5</math> percent</b>

# 3174 Proposed Revisions

## Order 4

- Measurement by tank gauge or LACT only

## Proposed 3174

- Would also allow and define standards for stand-alone Coriolis Measurement Systems (CMS)

# 3174 Proposed Revisions

## Order 4

- LACT systems require ATC/ATG
- PD meter only

## Proposed 3174

- ATC/ATG prohibited, must use temperature averager instead
- Allows Coriolis meter in lieu of PD meter



# 3174 Proposed Revisions

## Order 4

- LACT proving done quarterly ( $\leq 100,000$  bbls month), monthly if  $>100,000$  bbls/month

## Proposed 3174

- Proving would be required every 50,000 bbls or quarterly, whichever comes first

# 3174 Proposed Revisions

## Order 4

- Measurement tickets not required for LACTs

## Proposed 3174

- Generate measurement ticket after proving and monthly for LACT and CMS

# **3174 Proposed Revisions**

## **Specific Data/Comment Requests**

- Proposed Measurement Volume Uncertainty Levels
- Use of Automatic Tank Gauging Systems
- Composite Sampling Systems on a CMS
- Ways to Address Meter Factor Determinations with Variable Flow Rates, Pressures, or API Oil Gravities
- Handbook Approach for dealing with Violations and Corrective Actions

**Questions/Comments**

# **Subpart 3175: Gas Measurement**

# 3175 Proposed Revisions

## Order 5

- Orifice plates and mechanical recorders only
- EGM systems (statewide NTLs)

## Proposed 3175

- Orifice plates
- Mechanical recorders
- Approved EGM systems
- Specific guidance for alternate measurement and flow conditioners

# 3175 Proposed Revisions

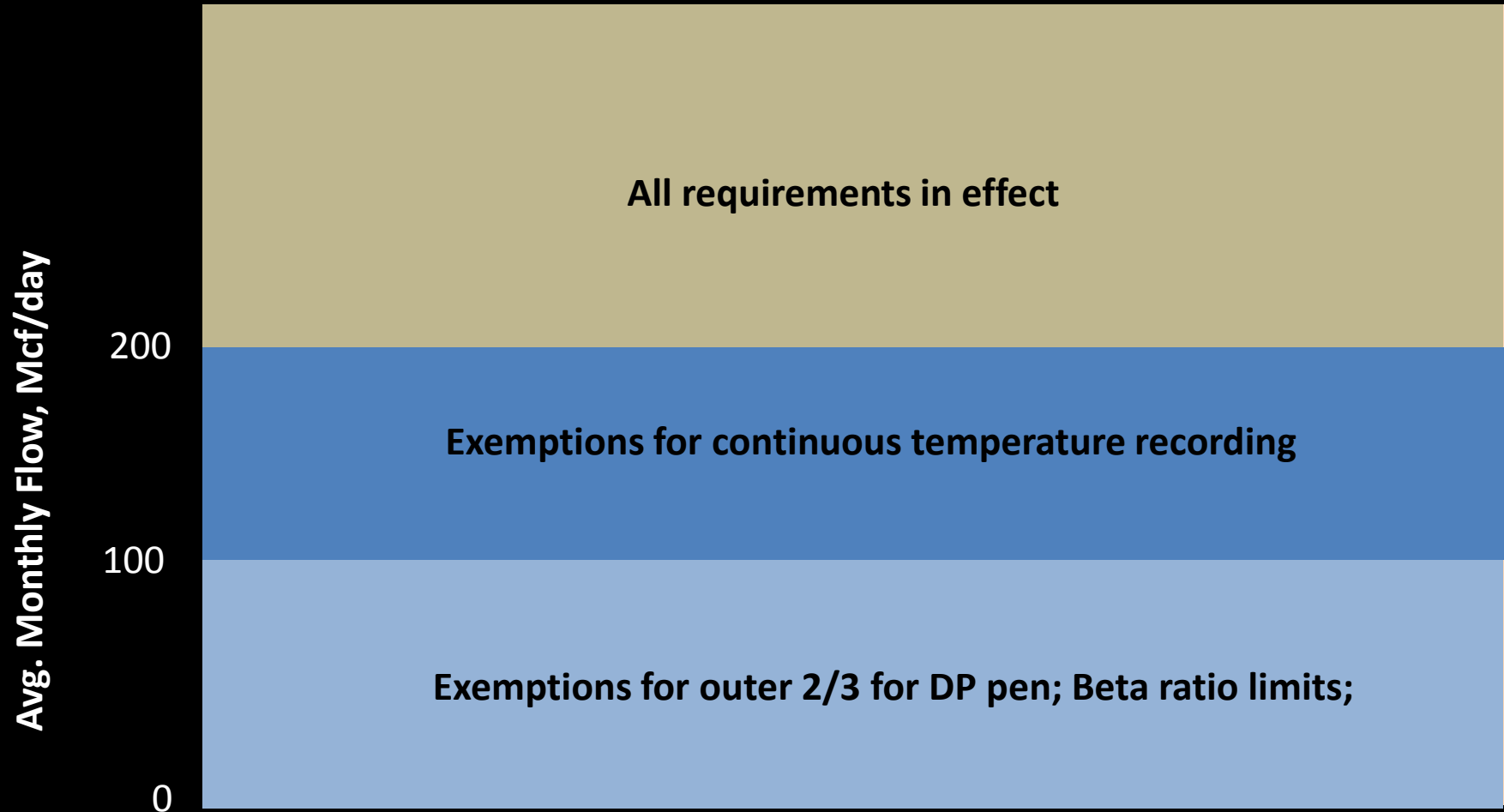
## Order 5

- No overall performance standards given
- Three tiers of requirements

## Proposed 3175

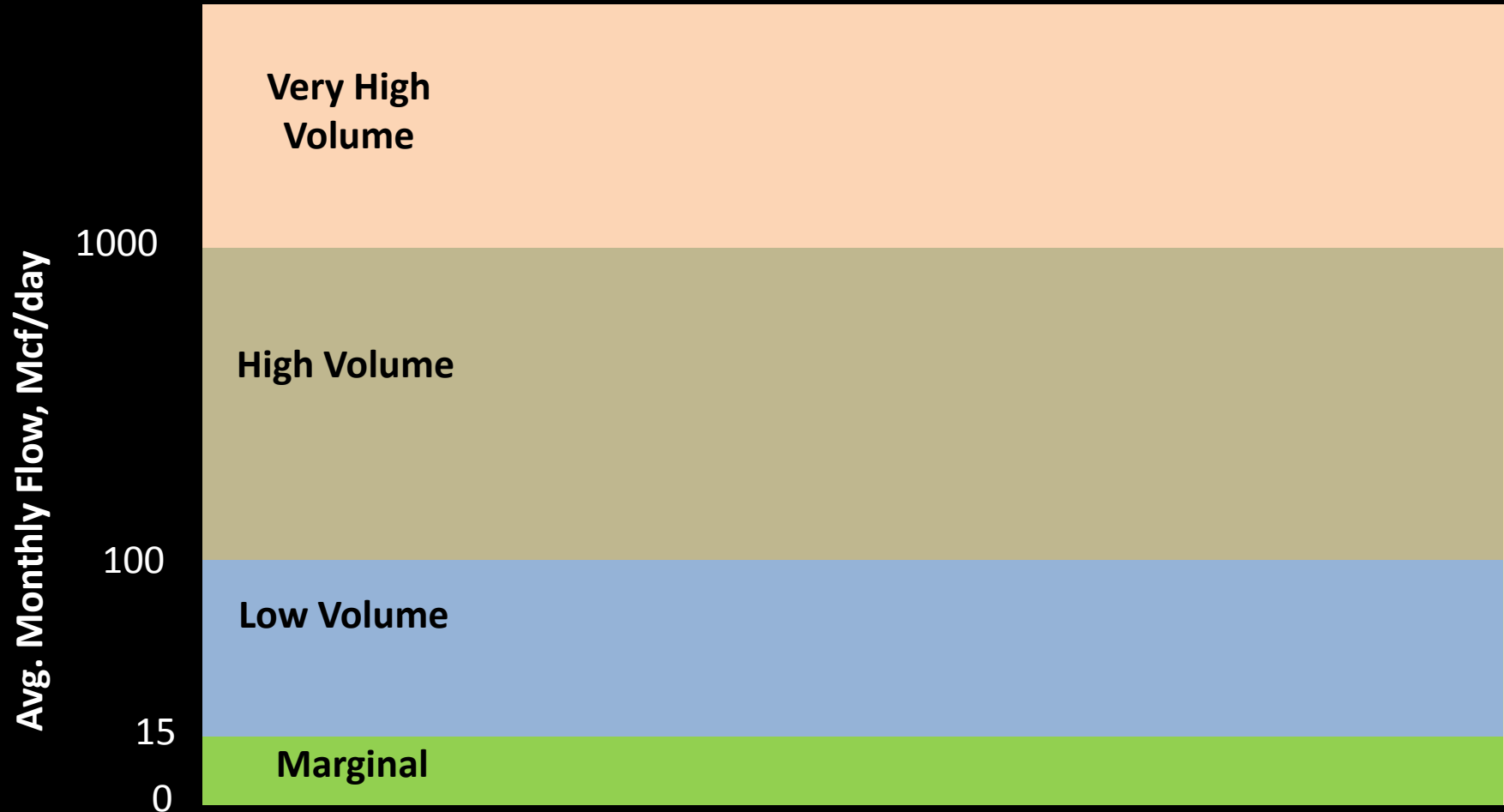
- Would establish 4 tiers of performance standards based on average flow rate:

# Order 5

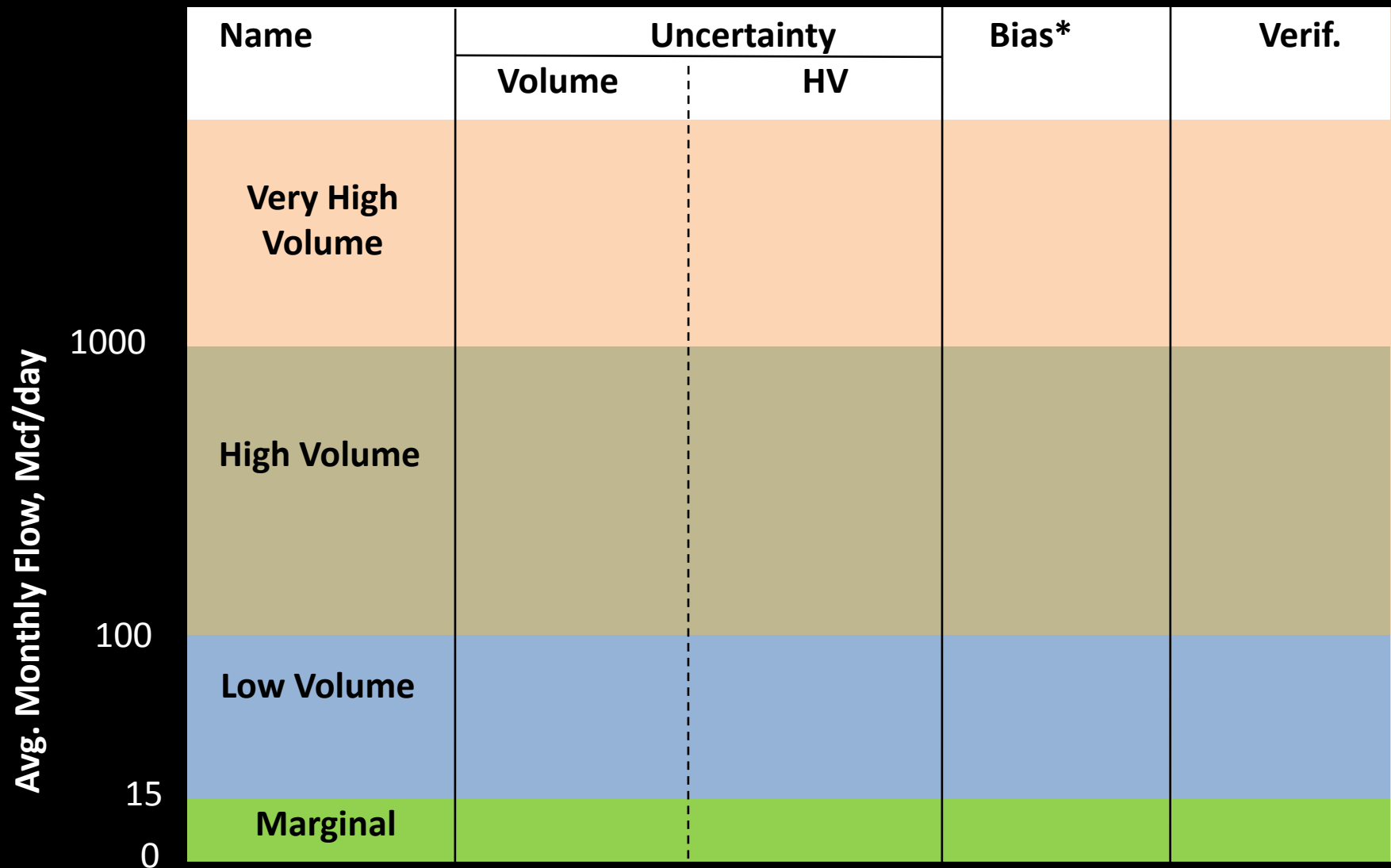




# 3175 Proposed Revisions



# 3175 Proposed Revisions



# 3175 Proposed Revisions

Avg. Monthly Flow, Mcf/day	Name	Uncertainty		Bias*	Verif.
		Volume	HV		
	Very High Volume	±2%	±1%	0	yes
	High Volume	±3%	±2%	0	yes
	Low Volume	n/a	n/a	0	yes
0	Marginal	n/a	n/a	n/a	yes

# 3175 Proposed Revisions

## Order 5

- **Adopts AGA Report No. 3 (1985) – primary device and flow rate calculations**

## Proposed 3175

- **Would adopt new API and GPA standards covering:**
  - **Primary device**
  - **Electronic Gas Measurement Systems**
  - **Flow rate, volume, and heating value calculations**
  - **Gas sampling and analysis**

# 3175 Proposed Revisions

## Current Order 5

- No inspection requirements for meter tubes

## Proposed 3175

- Meter tubes would have to be inspected
- Frequency would depend on classification of meter:

# 3175 Proposed Meter Tube Inspection Requirements

Category	Visual Inspection	Detailed Inspection
Marginal Volume (< 15 Mcf/day)	n/a	n/a
Low Volume (15 – 100 Mcf/day)	Once every 5 years	n/a
High Volume (100 – 1000 Mcf/day)	Once every 2 years	Once every 10 years
Very-High Volume (> 1000 Mcf/day)	Once every year	Once every 5 years

# 3175 Proposed Revisions

## Order 5

- Mechanical recorders automatically approved

## Proposed 3175

- Mechanical recorders would be restricted to marginal and low volume FMPs (< 100 Mcf/day)

# 3175 Proposed Revisions

## Order 5

- Btu determined at least once per year

## Proposed 3175

- Sampling frequency as follows:



# 3175 Proposed Sampling Frequency

Category	Sampling Frequency
Marginal Volume ( $< 15$ Mcf/day)	Once per year
Low Volume ( $15 - 100$ Mcf/day)	Once every 6 months
High Volume ( $100 - 1000$ Mcf/day)	Once every 3 months; achieve heating value uncertainty of $\pm 2\%$
Very-High Volume ( $> 1000$ Mcf/day)	Once every month; achieve heating value uncertainty of $\pm 1\%$

# 3175 Proposed Revisions

## Proposed 3175 (continued)

- Composite or online GC would be required if spot sampling cannot meet uncertainty requirements
- Would require all gas analyses to be submitted

# 3175 Proposed Revisions

## Order 5

- No requirements for sample location or method
- No requirements for gas chromatograph (GC)

## Proposed 3175

- Sampling probe 1 – 2 times dimension “B”  
downstream of the primary device
- Five spot-sampling methods would be allowed
- Requirements for GC calibration and operation
- Extended analysis (C9+) required if C6+ was  $> 0.25$   
mole %

# 3175 Proposed Revisions

## Order 5

- No requirements for Btu reporting

## Proposed 3175

- Btu reporting would be:
  - Gross
  - Real
  - Dry
  - 14.73 psi
  - 60° F

# 3175 Proposed Revisions

## Order 5 and Statewide NTLs

- No requirements for independent testing of transducers or flow computers
- All transducers and flow computers accepted

## Proposed 3175

- Testing protocol would be defined for all transducers and flow computers
- PMT would review results and develop list of approved devices

# 3175 Proposed Revisions

## Specific Data/Comment Requests

- Cost to industry for type testing transducers
- Comments on whether 5 transducers constitutes a statistically representative sample
- Requirements/standards for on-line gas chromatographs (e.g. API 22.6)
- Data showing water vapor saturation
- Data showing correlations between sample probe placement and composition

# 3175 Proposed Revisions

## Specific Data/Comment Requests

- Costs of retrofitting orifice meters to meet eccentricity requirements of API 14.3.2
- Costs to chart integration companies to switch from the 1985 to the 1992/2013 calculations
- Data showing the difference between C6+ and C9+ analysis as a function of C6+ mole percent

**Questions/Comments**